

HAT IS CLAIMED IS:

- 1 1. A method for reducing standby time for printing in a system of networked
2 printers connected to at least one host computer, said method comprising the steps of:
3 (1) registering at least one item of network print information in at least one host
4 computer of the system;
5 (2) detecting the network printer information registered in the at least one host
computer if a command for printing print-data has been selected, to provide detected
network print information;
6 (3) transmitting a request command for requesting the networked printers of the
system to transmit standby print information concerning the amount of standby print
operations for the respective networked printers, using said detected network printer
information;
7 (4) evaluating the standby print information transmitted from the network printers
in response to the request command;
8 (5) detecting a minimum-utilized network printer, which is a printer having a
lowest amount of standby print operations among the networked printers having standby
print operations; and
9 (6) transmitting the print-data to the minimum-utilized network printer, detected
- 10 11 12 13 14 15 16 17

18 in the preceding step.

1 2. The method of claim 1, wherein said initial registration step comprises the steps

2 of,

3 (a) determining whether a command for registering network printer information

4 in the at least one host computer has been selected;

5 (b) detecting the network printers connected to the network if said command for
registering network printer information in the at least one host computer has been
selected; and

(c) storing the network printer information in a memory of the at least one host
computer.

3 3. The method of claim 2, comprising the further steps of:

2 (A) assigning priority numbers to said network printer information in detected
order; and

4 (B) storing the assigned priority numbers in said memory.

1 4. The method of claim 3, wherein said step of detecting a minimum-utilized

2 network printer step comprises the steps of:

3 (a) detecting the priority numbers that have been assigned to the network printers
4 having the lowest amounts of standby print operations, if the number of the network
5 printers having the lowest amounts of standby print operations is at least two; and
6 (b) selecting as the minimum-utilized printer a network printer to which a
7 preferential priority number was assigned.

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2 5. The method according to claim 1, wherein said network printer information
3 includes an Internet protocol address of the registered network printer.

4
5 6. A subsystem for reducing standby time for printing in a networked system of
6 a plurality of networked printers and at least one host printer, said subsystem comprising:
7 a first means for registering at least one item of network print information in at least one
8 host computer of the system;
9 a second means for detecting the network printer information registered in the at least one
10 host computer if a command for printing print-data has been selected, to provide
 detected network print information;
11 a third means for transmitting a request command for requesting the networked printers
12 of the system to transmit standby print information concerning the amount of
13 standby print operations for the respective networked printers, using said detected

11 network printer information;

12 a fourth means for evaluating the standby print information transmitted from the network

13 printers in response to the request command;

14 a fifth means for detecting a minimum-utilized network printer, which is a printer having

15 a lowest amount of standby print operations among the networked printers having

16 standby print operations; and

17 a sixth means for transmitting the print-data to the minimum-utilized network printer

 detected by the fifth means.

7. The system of claim 6, wherein said first means comprises:

a means for determining whether a command for registering network printer information
in the at least one host computer has been selected;

a means for detecting the network printers connected to the network if said command for
registering network printer information in the at least one host computer has been
selected; and

a means for storing the network printer information in a memory of the at least one host
computer.

8. The system of claim 7, further comprising:

- 2 a means for assigning priority numbers to said network printer information in detected
3 order, and
4 a means for storing the assigned priority numbers in said memory.

1 9. The system of claim 8, further comprising:

- 2 a means for detecting the priority numbers that have been assigned to the network
3 printers having the lowest amounts of standby print operations, if the number of
the network printers having the lowest amounts of standby print operations is at
least one two; and
a means for selecting as the minimum-utilized printer a network printer to which a
preferential priority number was assigned.

10. A printing system comprising:

- a network;
at least one host computer connected to the network;
a plurality of printers connected to the network;
a control unit connected to the at least one host computer, said control unit comprising:
a first means for registering at least one item of network print information in at
least one host computer of the system;

8 a second means for detecting the network printer information registered in the at
9 least one host computer if a command for printing print-data has been
10 selected, to provide detected network print information;
11 a third means for transmitting a request command for requesting the networked
12 printers of the system to transmit standby print information concerning the
13 amount of standby print operations for the respective networked printers,
14 using said detected network printer information;
15 a fourth means for evaluating the standby print information transmitted from the
16 network printers in response to the request command;
17 a fifth means for detecting a minimum-utilized network printer, which is a printer
18 having a lowest amount of standby print operations among the networked
19 printers having standby print operations; and
20 a sixth means for transmitting the print data to the minimum-utilized network
21 printer detected by the fifth means.

11. The system of claim 10, wherein said first means comprises:

- a means for determining whether a command for registering network printer information in the at least one host computer has been selected;
- a means for detecting the network printers connected to the network if said command for

5 registering network printer information in the at least one host computer has been
6 selected; and
7 a means for storing the network printer information in a memory of the at least one host
8 computer.

1 12. The system of claim 11, further comprising:

2 a means for assigning priority numbers to said network printer information in detected
3 order, and
4 a means for storing the assigned priority numbers in said memory.

5 13. The system of claim 12, further comprising:

6 a means for detecting the priority numbers that have been assigned to the network
7 printers having the lowest amounts of standby print operations, if the number of
8 the network printers having the lowest amounts of standby print operations is at
9 least one two; and
10 a means for selecting as the minimum-utilized printer a network printer to which a
11 preferential priority number was assigned.

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